

SECOND EDITION

MANUAL of
Revolving Door Construction
and Architectural Design
With Architects'
Standard Specifications

TRADE MARK



U.S. REGISTRY NO. 94133

*This book is published in
the interest of ARCHITECTS
and CONTRACTORS by the*

VAN KANNEL
REVOLVING DOOR COMPANY
716 WHITLOCK AVENUE
NEW YORK CITY

Van Kannel Revolving Door Co.,
NEW YORK, N. Y.

*Makers of Better Entrances for
Banks, Office Buildings, Retail
Establishments, Hotels, Rest-
aurants, Libraries and Public
Institutions in general, presents
with Cordial Assurances of
Cooperation to*

Mr. M. Shepard

This Manual of Standard Specifications on
REVOLVING DOORS

Public Servants at the Cross-Roads of the World~



*T*HERE are few better examples of the pleasing architectural designs possible with Van Kannel Revolving Doors than the Hotel Roosevelt entrance pictured above. This, the New York member of the famous United Chain of Hotels, at 45th Street and Madison Avenue adjacent to the Grand Central, was designed by George B. Post & Sons, Architects, with whom it was our pleasure to co-operate in this installation. On the succeeding pages you will see detailed standard specifications prepared for architects' use.



~Choose the dependable Van Kannel door.

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Why Revolving Doors

(ARCHITECTS' AND CONTRACTORS' SUMMARY)



No. 1. Van Kannel Doors Save Coal

Revolving Doors, by controlling the admission of cold air to buildings, conserve coal. Testimony of users frequently mention savings effected as high as 25%.

No. 2. Van Kannel Doors Promote Health

Revolving Doors promote health through the elimination of dust and drafts. This means less absence due to sickness and a higher degree of efficiency during working hours.

No. 3. Van Kannel Doors Conserve Floor Space

Revolving Doors conserve space by making large heated vestibules unnecessary and enabling the use of floor space up to the threshold of doors.

No. 4. Van Kannel Doors Eliminate the Problem of Wind Pressure against Entrance Doors

By providing means of ingress and egress through an entrance way consisting of four wings suspended on a ball-bearing carriage—perfectly balanced and adjusted—the problem presented by high wind pressure against entrance doors is absolutely eliminated.

No. 5. Van Kannel Doors Eliminate Entrance Dust

Since dust at entrances must be carried into the building by draughts of air and since draughts of air at entrances are absolutely eliminated by Van Kannel Doors, this objectionable feature of dust admission at entrance doors is overcome.

No. 6. Van Kannel Doors Increase Efficiency

Health is one requisite to efficiency—(See No. 2 above). In addition to this, Revolving Doors eliminate outside street noises more effectively than any other type of door and provide the best means available for controlling traffic and affording perfect ventilation at entrances.

No. 7. Van Kannel Doors Eliminate Entrance Traffic Confusion

Revolving Doors automatically divide traffic into incoming and outgoing streams. They eliminate confusion—their capacity at normal operation is greater than that of swinging doors. Tests on record at

Marshall Field's store, Chicago (users of 50 Van Kannel Revolving Doors), are a forceful evidence of the ability of revolving doors to handle large masses of people quickly and efficiently. In a special closing hour test from 5 P. M. to 5:10 P. M., a period of ten minutes, one door readily accommodated 1132 people. This is at the rate of 6792 people per hour.

No. 8. Van Kannel Doors Provide for Better Ventilation

Revolving Doors solve the ventilation problem at entrances, closing entrance to rain and snow—heat and cold—wind and dust, providing at the same time a door which permits easier access to building than swinging doors. Erection of storm doors is rendered unnecessary.

No. 9. Van Kannel Doors Meet Any Emergency

An automatic Collapsible Revolving Door will collapse under pressure in case of panic. Their use guarantees the utmost available in a safe entrance. They are recognized by all building codes.

No. 10. Van Kannel Doors Are Built to Endure

Three decades of satisfactory service are proof of Van Kannel durability. Single doors have served over 50,000,000 people. We have innumerable records of doors in use over 17 years and with a minimum of repairs. Users of Van Kannel Doors have evidenced their satisfaction by making purchases of over 3000 additional revolving doors for their other entrances.

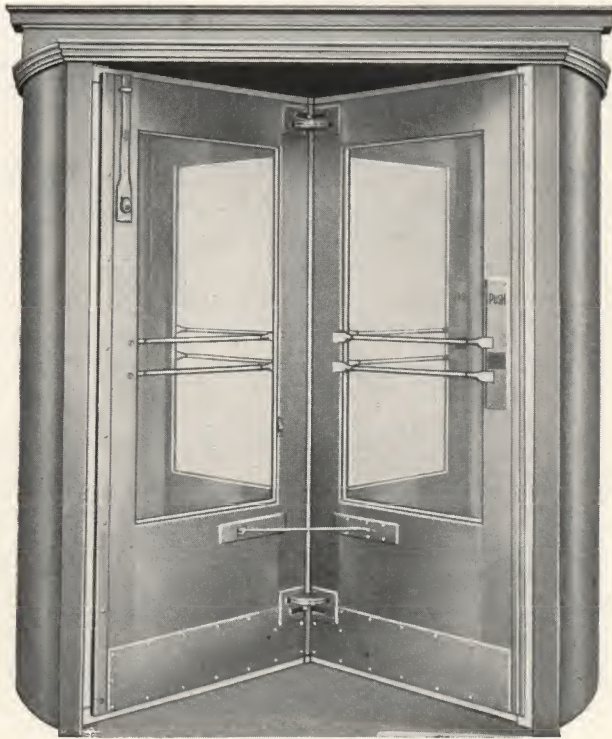
No. 11. Van Kannel Doors Harmonize with Entrance Designs

That part of an establishment which makes the first direct impression upon the people who enter is the entrance. The Van Kannel entrance means prestige without high price—for it means quality of product with economy of operation.

No. 12. Van Kannel Doors Constitute the Most Economical Design of Entrance

Due to increased efficiency obtained, to actual economies effected and to the improved appearance and increased prestige resulting from the installation of Van Kannel Doors, the results obtained from their use soon eliminate the question of cost.

Standard Specifications



TYPE: JC, AUTOMATIC COLLAPSIBLE
STANDARD DESIGN: 1192-1

Specification

"Furnish and install where shown on plans, revolving doors of the Van Kannel Revolving Door Company make, Design 1192-1 (Vestibule finished on both sides) or 1192-1-U (Vestibule finished on inside only), Automatic Collapsible. Material: (if wood) the kind selected to match surrounding trim; (if metal) either bronze plate on wood core construction or hollow metal." (See specification for standard equipment bottom of page 8.) The illustration at the left shows door of above design constructed of 20 gauge bronze plate on wood core.

TYPE: JC, AUTOMATIC COLLAPSIBLE
STANDARD DESIGN: 1192-2

Specification

"Furnish and install where shown on plans, revolving doors of the Van Kannel Revolving Door Company make, Design 1192-2, Automatic Collapsible. Material: (if wood) the kind selected to match surrounding trim; (if metal) either bronze plate on wood core construction or hollow metal." (See specification for standard equipment bottom of page 8.) The illustration at the right shows door of above design constructed of 20 gauge bronze plate on wood core.



Standard Specifications



TYPE: JC, AUTOMATIC COLLAPSIBLE

STANDARD DESIGN: 1192-3

Specification

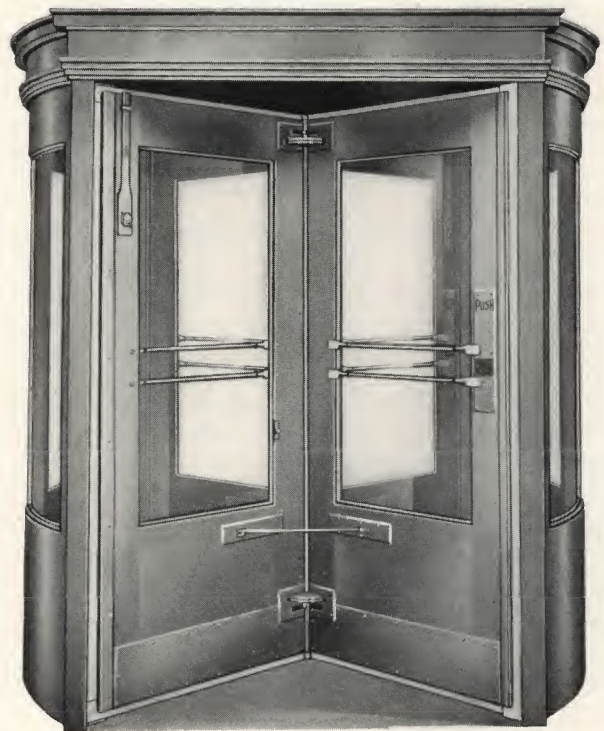
"Furnish and install where shown on plans, revolving doors of the Van Kannel Revolving Door Company make, Design 1192-3, Automatic Collapsible. Material: (if wood) the kind selected to match surrounding trim; (if metal) either bronze plate on wood core construction or hollow metal." (See specification for standard equipment bottom of page 8.) The illustration at the left shows door of above design constructed of 20 gauge bronze plate on wood core.

TYPE: JC, AUTOMATIC COLLAPSIBLE

STANDARD DESIGN: 1192-4

Specification

"Furnish and install where shown on plans, revolving doors of the Van Kannel Revolving Door Company make, Design 1192-4, Automatic Collapsible. Material: (if wood) the kind selected to match surrounding trim; (if metal) either bronze plate on wood core construction or hollow metal." (See specification for standard equipment bottom of page 8.) The illustration at the right shows door of above design constructed of 20 gauge bronze plate on wood core.



Standard Specifications



TYPE: C, RIGID BRACE ARM
(Collapsible)

STANDARD DESIGN: 1192-1

Specification

"Furnish and install where shown on plans, revolving doors of the Van Kannel Revolving Door Company make, Design 1192-1 (Vestibule Finished on both sides) or Design 1192-1-U (Vestibule Finished on inside only), Collapsible. Material: (if wood) the kind selected to match surrounding trim; (if metal) either bronze plate on wood core construction or hollow metal." (See specification for standard equipment at bottom of page 8). The illustration at the left shows door of above design constructed of Quartered Oak.

TYPE: C, RIGID BRACE ARM
(Collapsible)

STANDARD DESIGN: 1192-2

Specification

"Furnish and install where shown on plans, revolving doors of the Van Kannel Revolving Door Company make, Design 1192-2; Collapsible. Material: (if wood) the kind selected to match surrounding trim; (if metal) either bronze plate on wood core construction or hollow metal." (See specification for standard equipment at bottom of page 8.) The illustration at the right shows door of above design constructed of Quartered Oak.



Standard Specifications



TYPE: C, RIGID BRACE ARM
(Collapsible)

STANDARD DESIGN: 1192-3

Specification

"Furnish and install where shown on plans, revolving doors of the Van Kannel Revolving Door Company make, Design 1192-3, Collapsible. Material: (if wood) the kind selected to match surrounding trim; (if metal) either bronze plate on wood core construction or hollow metal." (See specification for standard equipment bottom of page 8.) The illustration at the left shows door of above design constructed of Quartered Oak.

TYPE: C, RIGID BRACE ARM
(Collapsible)

STANDARD DESIGN: 1192-4

Specification

"Furnish and install where shown on plans, revolving doors of the Van Kannel Revolving Door Company make, Design 1192-4, Collapsible. Material: (if wood) the kind selected to match surrounding trim; (if metal) either bronze plate on wood core construction or hollow metal. (See specification for standard equipment bottom of page 8.) The illustration at the right shows door of above design constructed of Quartered Oak.

Type "N" Fixtures

This type of fixture may be applied to any four-wing design of Van Kannel Revolving Door, made of any material. The four wings are held in their revolving position by means of metal brace arms in the form of hooks. When it is desired to fold the wings for any reason it is only necessary to unhook the brace arms and hook them back against the fixed wings, since all the four brace arms are attached to these wings by means of sockets. After the brace hooks are caught back, as above mentioned, the two hinged wings can be folded and the revolving door may assume positions illustrated on page 18.



Standard Specifications



TYPE: Stock "SERIES" (Collapsible)

DESIGN: 1-S

MATERIAL: White Pine

Size: 6' 6" x 6' 10"

Specification

"Furnish and install where shown on plans, revolving doors of the Van Kannel Revolving Door Company make, Design Stock "Series" No. 1, Collapsible. Woodwork to be White Pine, finish to match surrounding trim." (See specification for standard equipment at bottom of this page.)

TYPE: Stock "SERIES" (Collapsible)

DESIGN: 2-S

MATERIAL: White Pine

Size: 6' 6" x 6' 10"

Specification

"Furnish and install where shown on plans, revolving doors of the Van Kannel Revolving Door Company make, Design Stock "Series" No. 2, Collapsible. Woodwork to be White Pine, finish to match surrounding trim." (See specification for standard equipment below.)

Specification for Standard Equipment

"The Revolving Door Contract to include the revolving wings, circular walls, ceiling and cornice, together with all necessary mechanism, hardware, push bars, push plates, keylocks and kickplates. All glass, either bent or flat, to be best selected American polished plate."



Standard Specifications



TYPE: Stock "SPECIAL" JC
AUTOMATIC

Collapsible Hardware
DESIGN: 7

MATERIAL: Birch
Size: 7' x 7'

Specification

"Furnish and install where shown on plans, revolving doors of the Van Kannel Revolving Door Company make. Design Stock "Special" Automatic Collapsible Panic Proof mechanism—Design 7. Woodwork to be Birch, finish to match surrounding trim." (See specification for standard equipment at bottom of page 8.)

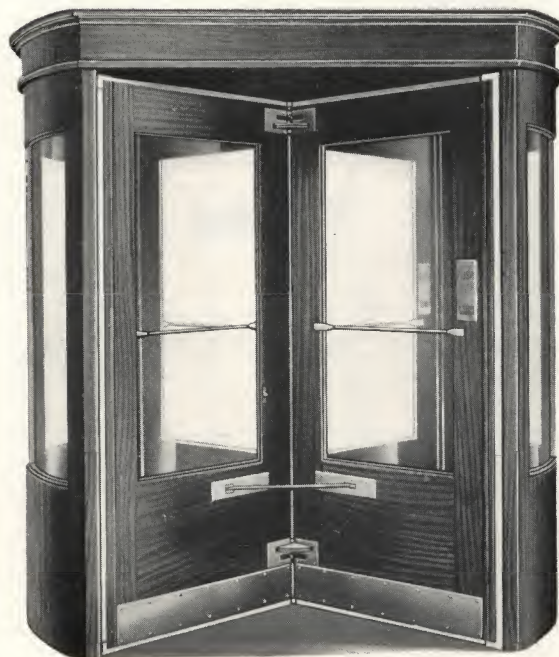
TYPE: STOCK "SPECIAL" JC
AUTOMATIC

Collapsible Hardware
DESIGN: 8

MATERIAL: Birch
Size 6' 6" x 6' 11"

Specification

"Furnish and install where shown on plans, revolving doors of the Van Kannel Revolving Door Company make. Design Stock "Special" Automatic Collapsible Panic Proof mechanism—Design 8. Woodwork to be Birch, finish to match surrounding trim." (See specification for standard equipment at bottom of page 8.)



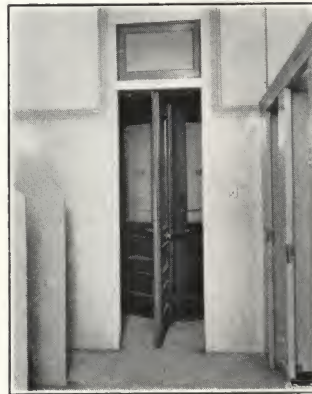
Three-Wing Door

In addition to the four-wing Van Kannel Revolving Doors, described on the preceding pages, there is also manufactured a three-wing type of revolving door. This is convenient when space available will not allow of a larger vestibule.

The dimensions required in width are from 4 feet 8 inches to 6 feet; height, 6 feet 6 inches to 7 feet 6 inches.

The capacity of the three-wing type of revolving door is substantially less than that of the four-wing type, but is greater than that of a single swinging door. In addition it affords all of the advantages of the always closed yet always open entrance. This type of door is manufactured in any of the materials heretofore described and in the same high grade manner.

There are two types of three-wing revolving door which we manufacture, type "MB" and type "MC."



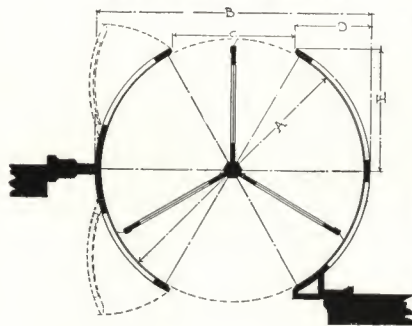
One of the 36 three-wing type revolving doors used by the Prudential Life Insurance Company at Newark, New Jersey.

Type "MB" three-wing revolving door has the three wings held in a rigid revolving position by rigid braces which do not allow the wings to be folded in the middle or to be moved to one side of the vestibule; this type merely acting on the ordinary turnstile principle.

Type "MC" three-wing revolving door is similar to type "MB" excepting that the wings are arranged by a series of hinges and hook braces so that the wings can be folded together in the middle for a third open position, central open position and also the wings moved to one side of the vestibule for a full open position when desired.

The illustration on this page shows one of the thirty-six three-wing type of revolving doors in use in the Prudential Life Insurance Co. offices at Newark, New Jersey.

See Table Below



THREE-WING REVOLVING DOORS.

STYLE MC.

Position 1

Position 2

Position 3

Position 4

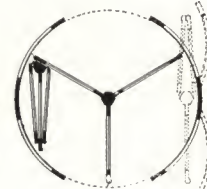
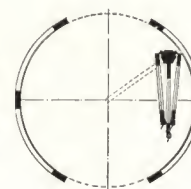
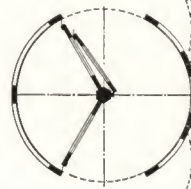
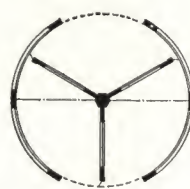
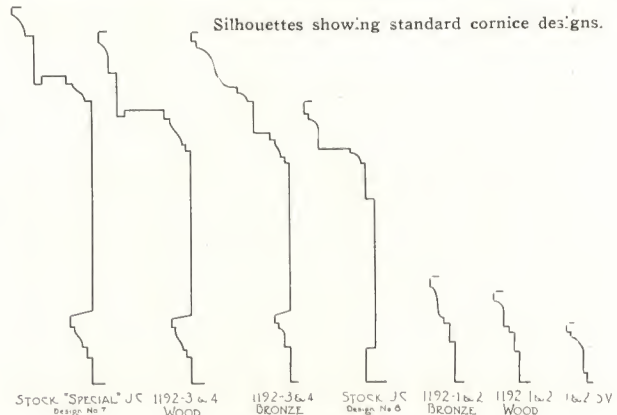
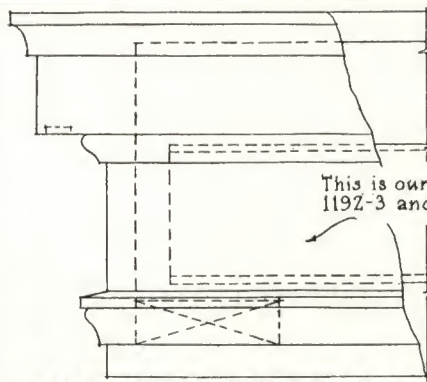


Table of Dimensions Three-Wing Doors

No.	A	B	C	D	E
1	4'- 8"	4'-11"	2'-13 1/4"	1'-45 5/8"	2'-21 1/4"
2	4'-10"	5'- 1"	2'-23 1/4"	1'-51 5/8"	2'-31 1/8"
3	5'- 0"	5'- 3"	2'-33 1/4"	1'-55 5/8"	2'-4 1/8"
4	5'- 2"	5'- 5"	2'-43 1/4"	1'-61 5/8"	2'-47 1/8"
5	5'- 4"	5'- 7"	2'-53 1/4"	1'-65 5/8"	2'-53 1/4"
6	5'- 6"	5'- 9"	2'-63 1/4"	1'-71 5/8"	2'-65 5/8"
7	5'- 8"	5'-11"	2'-73 1/4"	1'-75 5/8"	2'-71 1/2"
8	5'-10"	6'- 1"	2'-83 1/4"	1'-81 5/8"	2'-83 5/8"
9	6'- 0"	6'- 3"	2'-93 1/4"	1'-85 5/8"	2'-91 1/4"
10					

Silhouettes showing standard cornice designs.

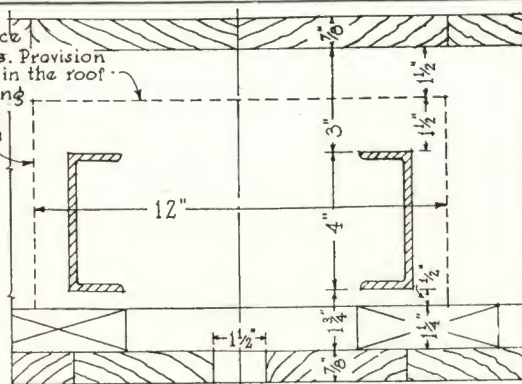




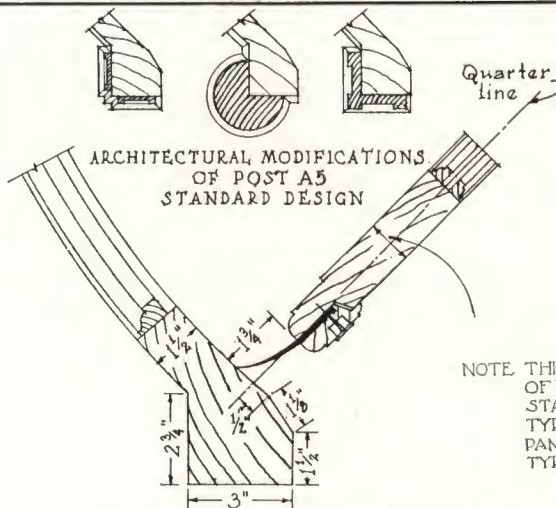
ELEVATION OF CORNICE

Dotted line shows space required for all types. Provision can be made, either in the roof or a trap in the ceiling to take care of our overhead mechanism.

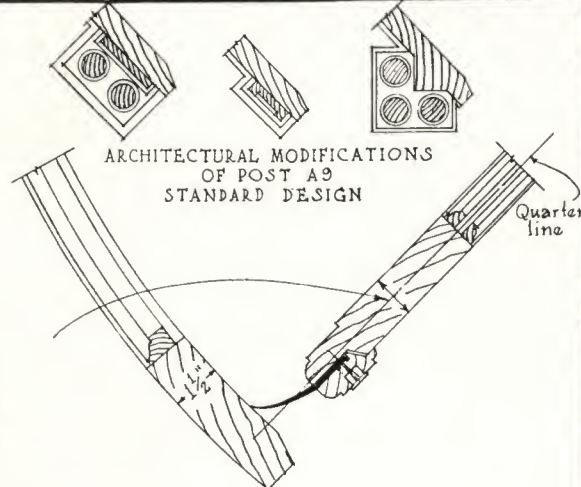
This is our high stock cornice, 1192-3 and 1192-4 designs. Our 1192-1 and 1192-2 designs have low cornice, 2 1/4" to 3" high, necessitating a channel box covering to protect overhead trolley mechanism.



CHANNEL CONSTRUCTION AND LOCATION

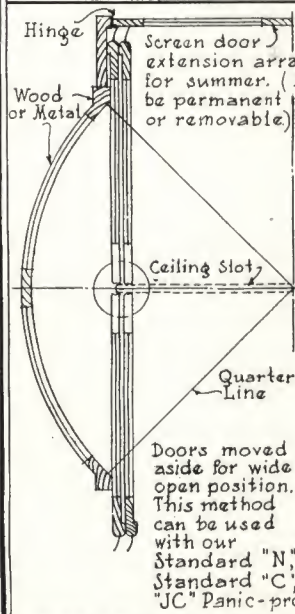


DETAIL OF POST A5 STANDARD DESIGN

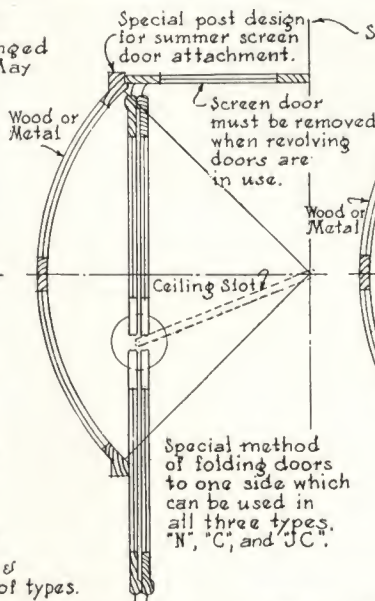


DETAIL OF POST A9 STANDARD DESIGN

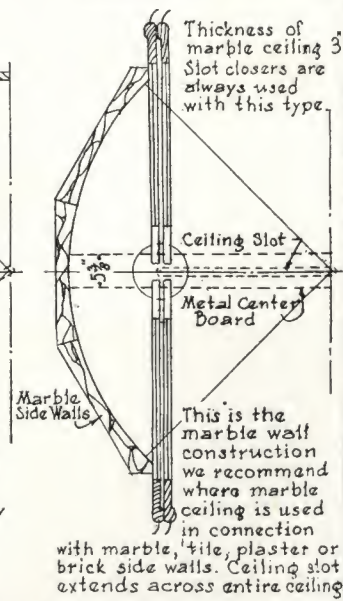
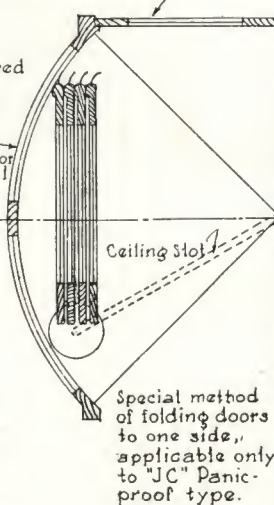
NOTE: THICKNESS OF WING STANDARD TYPE AND PANIC PROOF TYPE, 1 1/4"



Doors moved aside for wide open position. This method can be used with our Standard "N," Standard "C," or "JC" Panic-proof types.



Similar construction



This is the marble wall construction we recommend where marble ceiling is used in connection with marble, tile, plaster or brick side walls. Ceiling slot extends across entire ceiling.

NOTE: Standard size vestibule giving maximum capacity is 7'-0" diameter, 7'-0" high. Revolving doors are made in 3-wing and 4-wing types. The 3-wing type vestibule ranges from 4'-8" to 6'-0" diameter, and the 4-wing type ranges from 6'-0" to 8'-0" diameter. Normal diameter 7'-0". We also make 6-wing type doors, but do not advocate their use.

CONSTRUCTION DETAILS OF THE VAN KANNEL REVOLVING DOOR

Unique Provisions for Highest Quality Incorporated
in Specifications for Construction of

Van Kannel

Standard Bronze Revolving Doors

Having Wood Cores

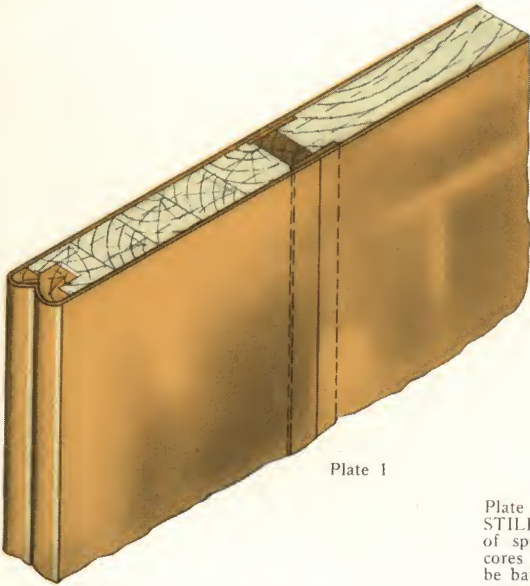


Plate 1

Plate 1. SECTION OF INNER STILE AND BOTTOM RAIL, BRONZE ON WOOD—All curved cores of enclosures to be built up of stiles and rails, the openings in same (when glass is not used) to be filled with panels. All stiles and rails to be constructed of seasoned and thoroughly kiln dried sound chestnut, sawed in strips not more than 1½ in. wide, band sawed to radius of enclosure, laid so as to alternate the grain of the chestnut to insure against warping and twisting, and thoroughly dowelled and glued together with best quality glue. (The illustration shows a back stile which in construction is similar to the curved walls).

Plate 4. SECTION TOP RAIL AND BACK STILE, BRONZE ON WOOD—Sheet bronze of specified gauge to be applied to wooden cores with adhesive material and all joints to be battened with 16 gauge strips, caulked and secured to cores with bronze rivets and screws spaced not less than 1 in. or more than 1½ in. on centers, applied in such manner that no battens, screws or riveted joints are visible on finished surface.

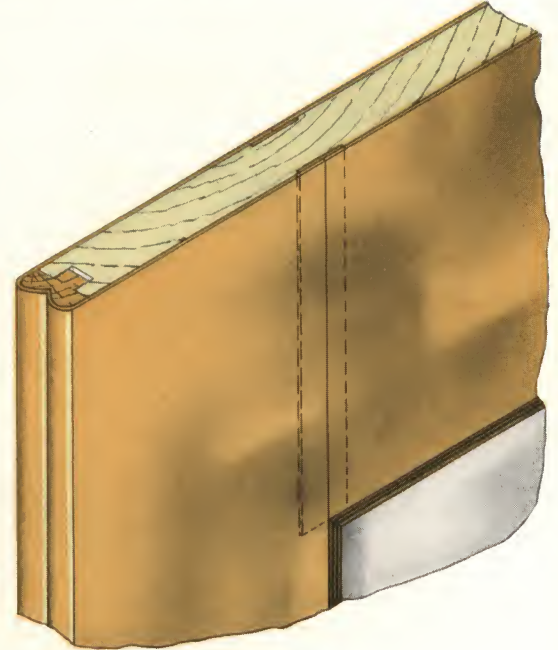


Plate 4

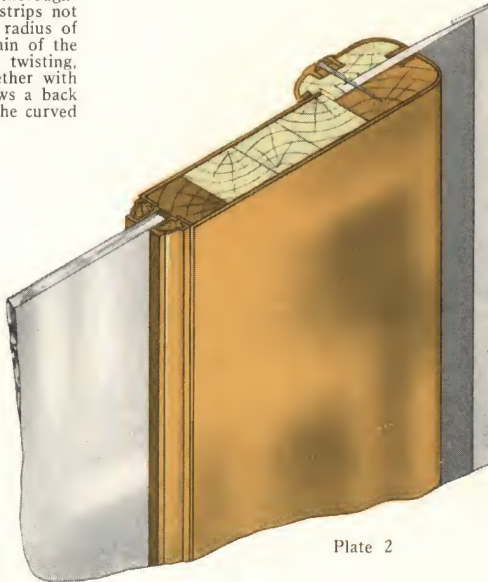


Plate 2. SECTION OF OUTER STILE, BRONZE ON WOOD—Cores of wings to be constructed in similar manner. All edges of cores to have facing of oak or birch. Sufficient time to be allowed between each operation for thorough drying of glue.

Plate 2

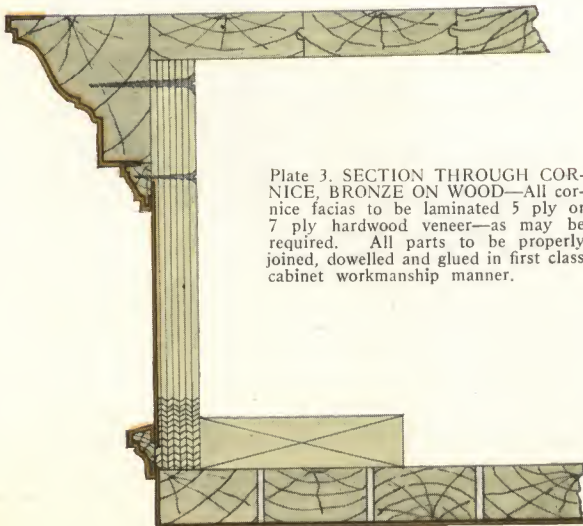


Plate 3. SECTION THROUGH CORNICE, BRONZE ON WOOD—All cornice facias to be laminated 5 ply or 7 ply hardwood veneer—as may be required. All parts to be properly joined, dowelled and glued in first class cabinet workmanship manner.

Plate 3

Plate 5. ELEVATION OF BRONZE ON WOOD WING—All surfaces to be filed, emieried and pumiced to a perfectly flat finish that presents the effect of cast bronze. All mouldings, formed members and edges to be sharp, square and clean as solid bronze.

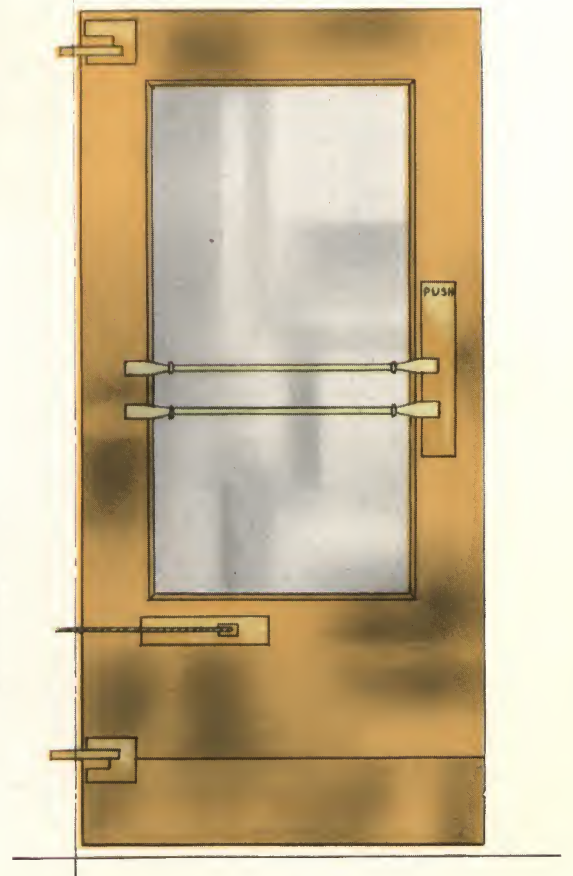


Plate 5

Unique Provisions for Highest Quality Incorporated
in Specifications for Construction of

Van Kannel

Standard Bronze Revolving Doors

Having Steel Cores

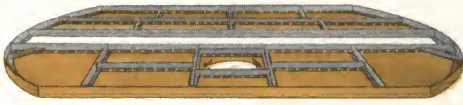


Plate 6

Plate 6. REINFORCED STEEL, CEILING AND WALL, HOLLOW BRONZE—Walls and ceiling to be built upon steel frames constructed of $1\frac{1}{2}$ in. x $\frac{3}{8}$ in. steel angles and channels, bent and shaped to radius, thoroughly riveted together before application of sheet bronze, to a thickness of $1\frac{5}{8}$ in. if covered two sides, and $1\frac{1}{8}$ in. if covered one side.



Plate 7. TOP RAIL AND BACK STILE, HOLLOW BRONZE—Wings to be constructed of 14 B/S gauge 1 in. x 2 in. rectangular seamless bronze tubing with special cast steel reinforcement for hanger to shaft. Special 14 gauge bronze channel moulding for holding rubbers and felts to edges of wings. All glass mouldings of hollow bronze, standard design.

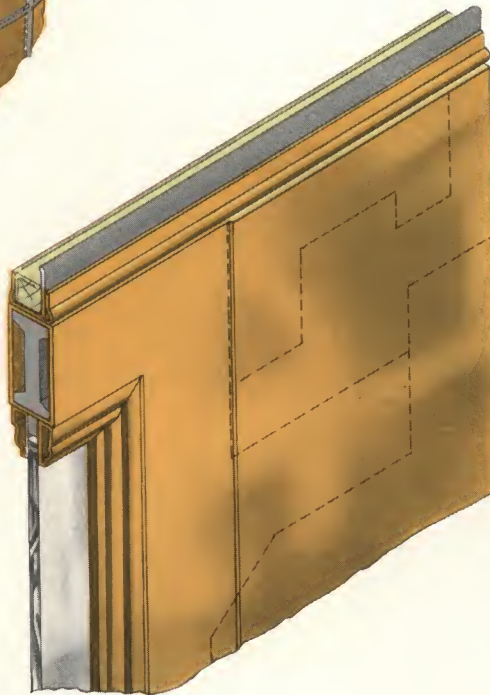


Plate 7

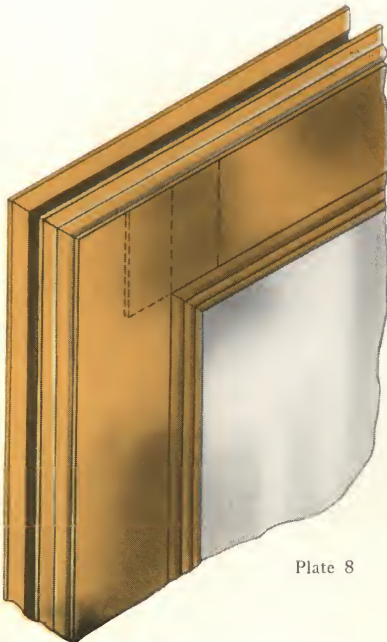


Plate 8

Plate 8. TOP RAIL AND OUTER STILE, HOLLOW BRONZE—To insure rigidity the outer stiles and top rails to have a minimum width of $3\frac{1}{2}$ in. including the glass and rubber mouldings.

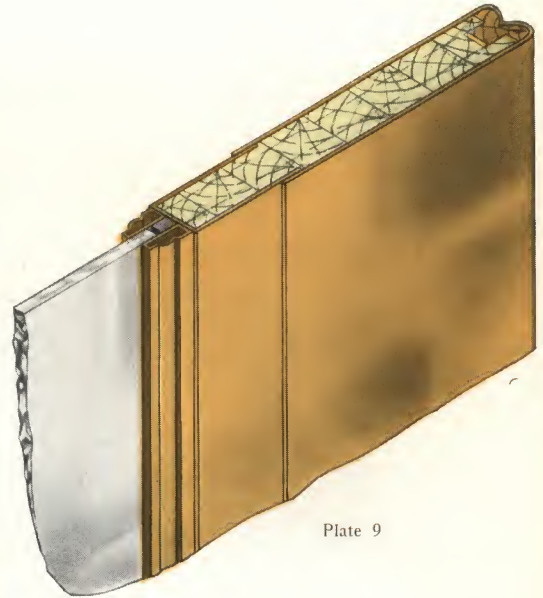


Plate 9

Plate 9. SECTION OF BACK STILE, HOLLOW BRONZE—Back stiles to be $8\frac{7}{8}$ in. wide including the glass mouldings and bottom rails $14\frac{7}{8}$ in. Back stile and bottom rail stiffened by laminated oak filler.

Plate 10. ELEVATION OF HOLLOW BRONZE WING—Sheet bronze of specified gauge to be applied to walls, ceilings and wings with $\frac{3}{8}$ in. diameter bronze rivets spaced not less than 1 in. or more than $1\frac{1}{2}$ in. on centers, applied in such manner as not to be visible on finished surface. All joints to be caulked. Corners and edges to be sharp and clean, and all surfaces to be perfectly flat, and smooth, hand filed, emiered and pumiced to give an effect equal to cast bronze.

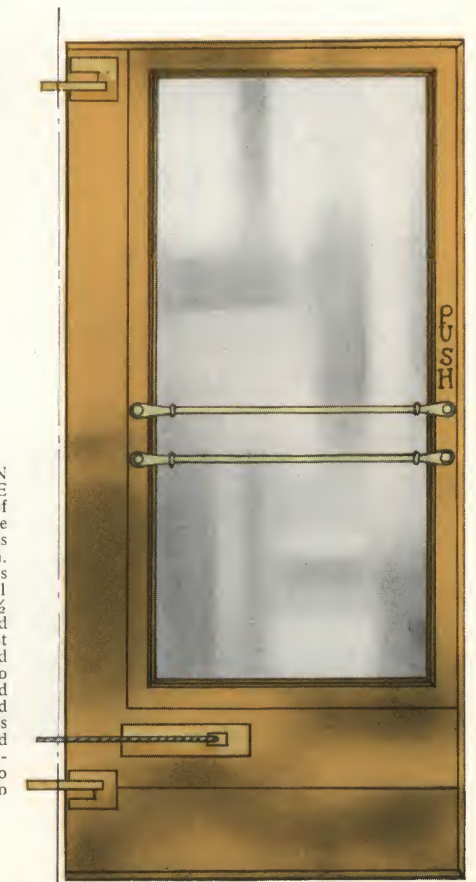
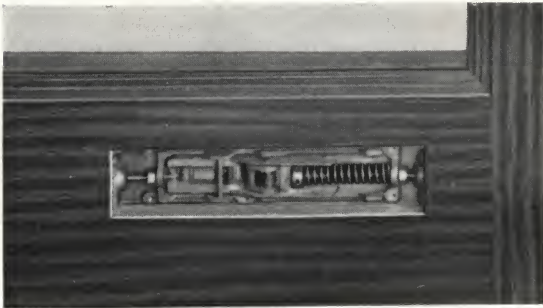


Plate 10.

Construction Features



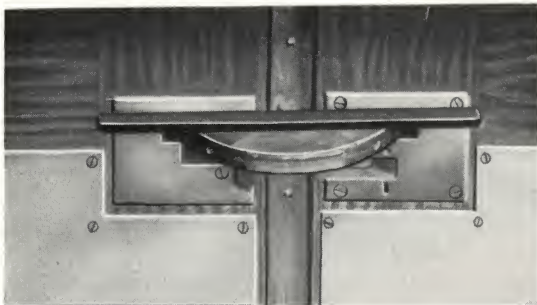
TYPE: JC (AUTOMATIC COLLAPSIBLE) CABLE RELEASING MECHANISM

The automatic cable releasing mechanism here illustrated is adjusted for normal pressure before leaving the factory. In case door is subject to excessive wind pressures, adjustment is easily and positively accomplished by simply tightening or releasing the spring tension which is accomplished by turning the adjustment nut here shown. This nut is locked by set screw.



TYPE: JC (AUTOMATIC COLLAPSIBLE) METHOD OF COLLAPSING

To manually collapse the automatic panic-proof type it is only necessary to pinch together the releasing pawl and cable end as here illustrated. The cable head instantly drops from its setting and wings can be swung into position for pushing to side of entrance way.



TYPE: JC (AUTOMATIC COLLAPSIBLE) FOLDING BAR

Wings are held in "Central open position" (See Plan, page 18, figure 3), by means of bars here shown which are provided with pins which readily drop into holes in circular disc.



TYPE: JC (AUTOMATIC COLLAPSIBLE) PIVOT LIFTER

Van Kannel Revolving Doors are all suspended from an overhead trolley, the socket in floor which receives end of center shaft merely acting as a guide. The center shaft, however, *does not revolve in the socket* but revolves around a pivot which is locked down into floor socket in such a manner that it cannot turn. Thus wear on floor socket is reduced to an almost negligible factor. The photograph shows end of pivot by means of which it is raised clear of floor socket, permitting the wings to be moved aside.

Construction Features



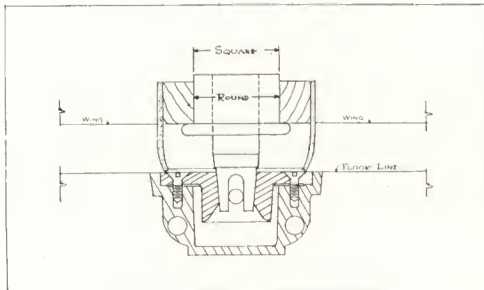
TYPE: C (COLLAPSIBLE)
METHOD OF COLLAPSING

The simple pressing of a Pawl on all "C" type Rigid Brace Arm doors, permits wings to assume parallel position (See figure 3, page 18), ready to be moved aside out of entrance or to assume other positions shown on page 18.



TYPE: N (COLLAPSIBLE)
METHOD OF COLLAPSING

Collapsing of an N type door is accomplished by merely raising arm out of socket provided. This arm is hooked to wing on which it is attached.



FLOOR SOCKET CONSTRUCTION USED
IN JC, C, N and "Special" TYPES

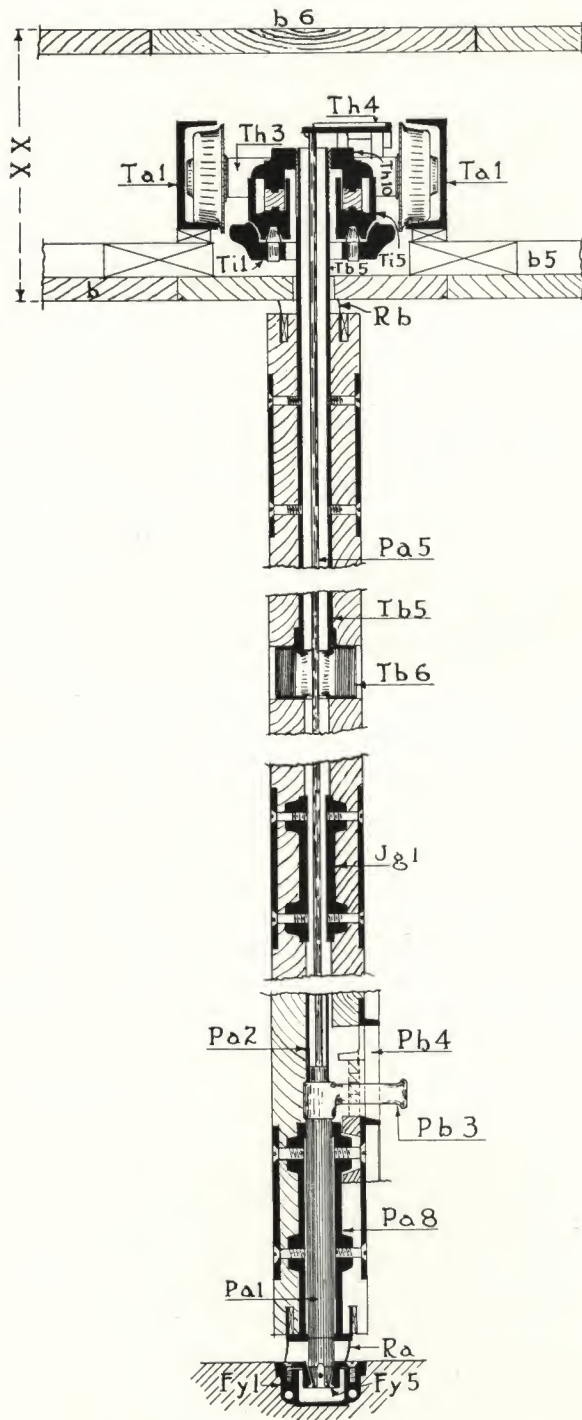
This illustration shows how Pivot on JC, C, N and "Special" types is locked in an immovable position in floor socket. The center shaft of revolving door rides around the pivot. Note that to replace floor socket, removable Section may be replaced without disturbing the setting of the floor socket holder.



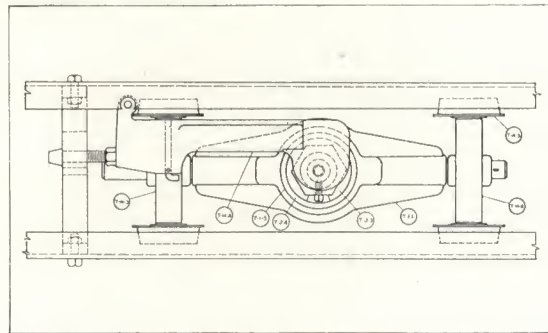
REPLACEMENT OF TOP AND BOTTOM
FELT AND RUBBER STRIPS

By taking out the screws along top and bottom of wings, felt or rubber strips which are tacked to wood strip as shown in cross-section at the left are readily pulled out. New felt or rubber strips can be tacked to wood strip and the same as easily replaced.

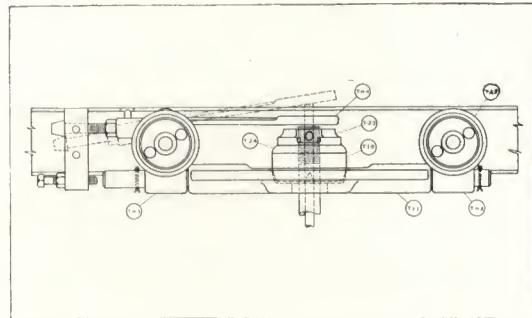
Overhead Trolley Construction



Center shaft assembly showing floor socket-pivot, pivot lifter, bearings, lift rod, trolley and trolley locking device.



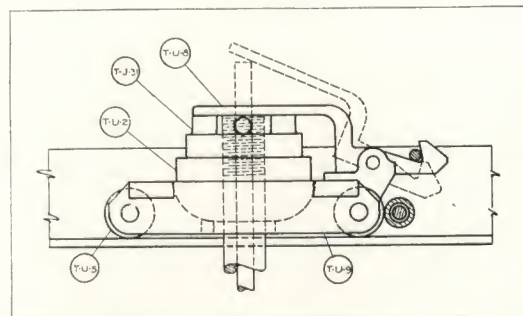
1. When Pivot Lifter (see page 14, Figure 4) is raised, it in turn raises arm No. T-H-4 (see position indicated by dotted lines in Fig. 2 below) which releases carriage and permits same to be rolled aside.



2. Drawing of same mechanism illustrated in Figure 3.



3. Side view of same trolley shown in Figs. 1 and 2 above—showing how carriage is held in place by Arm No. T-H-4 and how carriage rests on channel iron track.



4. When Pivot Lifter is raised, it in turn raises Arm No. T-U-8 (see position indicated by dotted lines) which releases carriage and permits same to be rolled aside.

Capacity Tests

The Answer to the Question, "Will Van Kannel Doors Handle the Crowds of People at the Entrances of the Buildings We Are Designing?"

A Van Kannel Revolving Door under ordinary momentum makes fifteen complete revolutions per minute. Each revolution provides unobstructed passageway for four persons both IN and OUT. Thus 3,600 persons in and 3,600 persons out is the hourly capacity of a Van Kannel Revolving Door under ordinary momentum.

The figures at the right in the table below, entitled "Maximum rate converted into hourly basis," are calculated by taking the highest fifteen-minute performance recorded in each case and multiplying this figure by four. This simply represents the number of people the door would handle every hour in the day, every day in the week, if the people were on hand to go through it.

Capacity Tests (1 Door)

Name	At end first 15 min.	At end 30 min.	At end 45 min.	At end 60 min.	Max. rate converted into hourly basis	Name	At end first 15 min.	At end 30 min.	At end 45 min.	At end 60 min.	Max. rate converted into hourly basis
John Wanamaker's... In New York City Out	38 31	81 71	129 105	176 163	188 232	World Building... In New York City Out	130 199	227 308	355 444	496 629	520 796
Total Traffic.....	69	152	234	339	420	Total Traffic.....	329	535	799	1125	1316
Y. M. C. A. In New York City Out	99 55	201 152	278 245	398 355	480 440	Manhattan Life Bldg. In New York City Out	164 128	311 238	453 251	559 432	656 512
Total Traffic.....	154	353	523	753	920	Total Traffic.....	292	549	804	991	1168
Hotel Commodore... In New York City Out	94 54	169 123	206 190	240 295	376 216	Amer'n Tract Society In Bldg., N. Y. City Out	160 172	311 310	416 421	533 516	640 688
Total Traffic.....	148	292	396	535	592	Total Traffic.....	332	621	837	1049	1328
Hotel Astor..... In New York City Out	240 209	478 427	..... .....	..... .....	952 872	Com'l Cable Bldg. In New York City Out	276 291	551 545	787 777	1018 1034	1104 1164
Total Traffic.....	449	905	.....	.....	1824	Total Traffic.....	567	1096	1564	2052	2268
Childs Restaurant... In New York City Out	337 86	644 162	931 317	1134 487	1148 620	Bk. of Com'ce Bldg. In New York City Out	298 200	502 345	748 533	961 679	1192 800
Total Traffic.....	423	806	1248	1621	1768	Total Traffic.....	498	847	1281	1640	1992
Bank of the U. S. In New York City Out	109 110	..... .....	..... .....	..... .....	436 440	Boreel Bldg. In New York City Out	82 100	163 197	231 274	337 363	424 356
Total Traffic.....	219	.....	.....	.....	876	Total Traffic.....	182	360	505	700	780

BENJAMIN W. MORRIS, *Architect*,
101 Park Avenue, New York City.

MEMORANDUM

Re—Comm. No. 262—Hartford, Conn., Trust Bldg.:

Analysis of Superintendent's Report on persons entering and leaving
Main Building Entrance of the Hartford-Connecticut Trust Building

PERIODS OF COUNT:

Entering Only:

March—2, 3, 5, 6, 7, 8, 9, 10, 12, 13, 14, 15, 16, 17, 19, 20, 21,
22, 23, 24, 26, 27, 28, 29, 31. Twenty-five (25) Days.

Entering and Leaving:

June—4, 5, 6, 7, 8. Five (5) Days.

		Average per Hr.	Max. per Hr.
(Income Tax)	March—First... 6 Days	418	571
(Income Tax)	March—Second 6 Days	492	801
Normal	March—Third. 6 Days	252	390
	March—Last... 7 Days	273	398

June—Five Days:

Entering	242	576
Leaving	243	622

Assume that between 12 and 2 on March 14th, 1,600 people entered
and 1,600 people left—

Total for two hours—both ways is	3200
Average per hour—both ways is	1600
Average per minute—both ways is	27
Average per minute—one way is	13.5
Highest per minute—one way is	13.3 (801/60)

Readings generally taken hourly from 8 to 5, inclusive; and six hours
on Saturdays.

Capacity Tests of 12 Revolving Doors installed at Equitable Building, 120 Broadway, New York, N. Y.

8 A. M. TO 6 P. M.

	In	Out	Total	Hourly Rate
Broadway Entrance (3 doors).....	22,646	21,272	43,918	4,392
Cedar St. Entrance (2 doors).....	4,188	5,412	9,600	960
Pine St. Entrance (2 doors).....	7,122	7,505	14,627	1,462
Nassau St. Entrance (3 doors).....	15,719	15,484	31,203	3,120
Subway Entrance (2 doors).....	7,410	5,288	12,698	1,270
Total Traffic	57,085	54,961	112,046	11,204

Note:—The Broadway entrance, consisting of 3 doors, approximately 25 per cent only of the total entrance equipment, handled approximately 40 per cent of the traffic.

Conditions During Test

You will note that in the tests recorded above all major classes of
users of revolving doors are represented.

In the majority of cases these buildings are the largest of their
kind in the City of New York, and the tests were made on the busiest
days at the busiest hours as far as could be determined.

Tests above tabulated record the number of people passing through
one door only. When more than one door was used in a building, the
most active door was selected for the purpose of test, and you will find
that the number of people passing through these entrances, as above re-
corded, are far in excess of average demands on entrance doors.

A test of particular interest not mentioned above was made at the
closing hour at Marshall Field & Co.'s Chicago store. Marshall Field &
Co. use over 50 Van Kannel Revolving Doors. They selected one of
the busiest entrances and made their test from 5 P. M. to 5:10 P. M.,
in which space of 10 minutes the door readily accommodated 1,132
people, 57 in and 1,075 out. These figures converted into an hourly
basis indicate that the Van Kannel door was handling the people at the
rate of 6,792 per hour.

It is a striking commentary, therefore, that though the entrances
used for test purposes in the above table are in some of the largest
buildings of their character in the world, these entrances in no instance
even approached at their busiest period of the day the normal capacity
of their Van Kannel Revolving Doors.

Positions

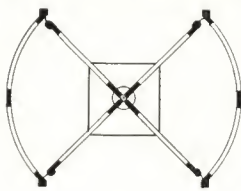


Fig. 1

Revolving Position

The four wings extended, permitting persons to pass in and out, at the same time excluding noise, rain and snow, heat and cold, wind and dust.

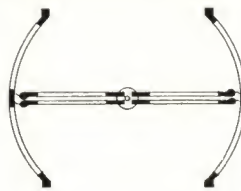


Fig. 2

Locked Position

The four wings folded in pairs and placed across vestibule, securely locked or bolted. Lock operates from both sides.



Fig. 3

Central Open Position

Wings folded flat in pairs and held in position by folding bars, making two passages separating traffic.

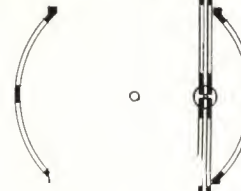


Fig. 4

Full Open Position

Wings folded and moved aside, making available full width of entrance.

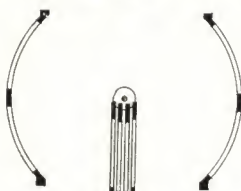


Fig. 5

Panic Collapsed Position

Wings folded on each other in outward position, dividing traffic into two streams.

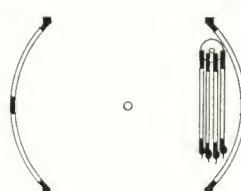


Fig. 6

Full Open Position with Wings Collapsed

Wings folded on each other and moved to one side making available full width of entrance.

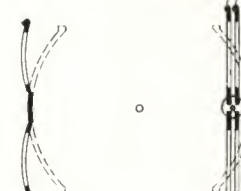


Fig. 7

Full Open Position with Flexed Walls

Wings folded and moved aside with hinged walls flexed for added space.

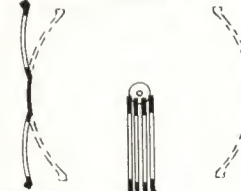


Fig. 8

Panic Collapsed Position with Flexed Walls

Wings folded on each other in outward position with walls flexed for added space.

Positions Assumed by Wings—All Types of Doors

Type JC Automatic Collapsible

Positions Nos. 1, 2, 3, 4 and 5 assumed by wings.

Note A:—One wing may be folded at a time if desired.

Note B:—Special trolley construction can be furnished

which will permit wings to assume position shown in Figure No. 6 above.

Note C:—FLEXED WALLS. In order to provide added entrance space where desired, flexed wall construction can be furnished which will permit wings to assume positions shown in Figures 7 and 8 above.

Type C Collapsible

Positions Nos. 1, 2, 3 and 4 assumed by wings.

Note:—One wing may also be folded at a time if desired.

Type N Collapsible

Positions Nos. 1, 2, 3 and 4 assumed by wings.

Note:—One wing may also be folded at a time if desired.

Type Stock "Series"

Positions Nos. 1, 2, 3 and 4 assumed by wings.

Note:—One wing may also be folded at a time if desired.

Type Stock "Special" Design 7

Positions Nos. 1, 2, 3, 4, and 5 assumed by wings.

Note:—One wing may also be folded at a time if desired.

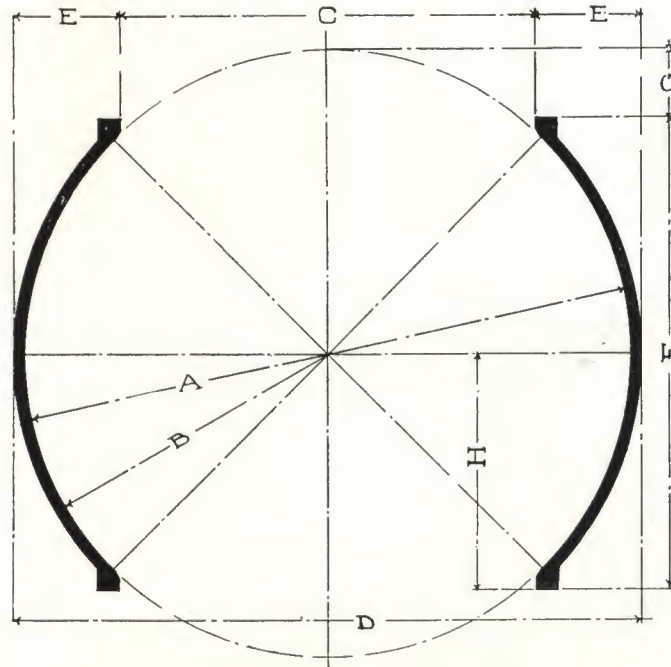
Type Stock "Special" Design 8

Positions Nos. 1, 2, 3, 4 and 5 assumed by wings.

Note:—One wing may also be folded at a time if desired.

Table of Dimensions

The following diagram will prove of service in indicating the various dimensions of revolving doors of the sizes recommended by the Company as practical for all purposes.



A	B	C	D	E	F	G	H
5'-8"	2'-10"	3'-10 1/4"	5'-11"	1'-0 3/8"	4'-5 3/4"	7 1/8"	2'-2 7/8"
5'-10"	2'-11"	3'-11 1/2"	6'-1"	1'-0 3/4"	4'-7 1/4"	7 3/8"	2'-3 5/8"
6'-0"	3'-0"	4'-1"	6'-3"	1'-1"	4'-8 1/2"	7 3/4"	2'-4 1/4"
6'-2"	3'-1"	4'-2 1/2"	6'-5"	1'-1 1/4"	4'-10"	8"	2'-5"
6'-4"	3'-2"	4'-4"	6'-7"	1'-1 1/2"	4'-11 1/2"	8 1/4"	2'-5 3/4"
6'-6"	3'-3"	4'-5 1/4"	6'-9"	1'-1 7/8"	5'-0 3/4"	8 5/8"	2'-6 3/8"
6'-8"	3'-4"	4'-6 1/2"	6'-11"	1'-2 1/8"	5'-2 1/4"	8 7/8"	2'-7 1/8"
6'-10"	3'-5"	4'-8"	7'-1"	1'-2 1/2"	5'-3 1/2"	9 1/4"	2'-7 3/4"
7'-0"	3'-6"	4'-9 1/2"	7'-3"	1'-2 3/4"	5'-5"	9 1/2"	2'-8 1/2"
7'-2"	3'-7"	4'-10 3/4"	7'-5"	1'-3 1/8"	5'-6 1/2"	9 3/4"	2'-9 1/4"
7'-4"	3'-8"	5'-0"	7'-7"	1'-3 1/2"	5'-8"	10"	2'-10 1/4"
7'-6"	3'-9"	5'-1 1/4"	7'-9"	1'-3 3/4"	5'-9 1/4"	10 3/8"	2'-10 5/8"
7'-8"	3'-10"	5'-3"	7'-11"	1'-4"	5'-10 3/4"	10 5/8"	2'-11 3/8"
7'-10"	3'-11"	5'-4 1/4"	8'-1"	1'-4 3/8"	6'-0"	11"	3'-0"
8'-0"	4'-0"	5'-5 3/4"	8'-3"	1'-4 5/8"	6'-1 1/2"	11 1/4"	3'-0 3/4"
8'-2"	4'-1"	5'-7 1/4"	8'-5"	1'-4 7/8"	6'-2 3/4"	11 5/8"	3'-1 3/8"
8'-4"	4'-2"	5'-8 3/4"	8'-7"	1'-5 1/8"	6'-4 1/4"	11 7/8"	3'-2 1/8"
8'-6"	4'-3"	5'-10"	8'-9"	1'-5 1/2"	6'-5 3/4"	12 1/8"	3'-2 7/8"
8'-8"	4'-4"	5'-11 1/2"	8'-11"	1'-5 3/4"	6'-7 1/4"	12 3/8"	3'-3 5/8"
8'-10"	4'-5"	6'-0 3/4"	9'-1"	1'-6 1/8"	6'-8 1/2"	12 3/4"	3'-4 1/4"
9'-0"	4'-6"	6'-2 1/4"	9'-3"	1'-6 3/8"	6'-10"	13"	3'-5"

Standard Type Wings:
Thickness 1 1/4" to 1 1/2", wood.
Thickness 1" to 1 1/2", metal.

Panic Proof Type Wings:
Thickness 1 1/4", wood.
Thickness 1" to 1 1/4", metal.

Door Vestibules:
4'-8" to 6'-0" diam. 3 wings.
6'-0" to 8'-0" diam. 4 wings.
8'-6" to 10'-0" diam. 6 wings.
7'-0" diam. normal.

Standard Size:
7'-0" to 7'-6" vestibules.
Large enough for maximum capacity, excepting the 10'-0" 6-wing vestibule.

KEY TO SIZES

Width Height

- A—6' 6" and under up to 7' 0"
- B—6' 6" and under over 7' 0" to 7' 6"
- C—6' 6" and under over 7' 6" to 8' 0"
- D—6' 6" to 7' 0" up to 7' 0"
- E—6' 6" to 7' 0" over 7' 0" to 7' 6"
- F—6' 6" to 7' 0" over 7' 6" to 8' 0"
- G—7' 0" to 7' 6" up to 7' 0"
- H—7' 0" to 7' 6" over 7' 0" to 7' 6"
- I—7' 0" to 7' 6" over 7' 6" to 8' 0"
- J—7' 6" to 8' 0" up to 7' 0"
- K—7' 6" to 8' 0" over 7' 0" to 7' 6"
- L—7' 6" to 8' 0" over 7' 6" to 8' 0"

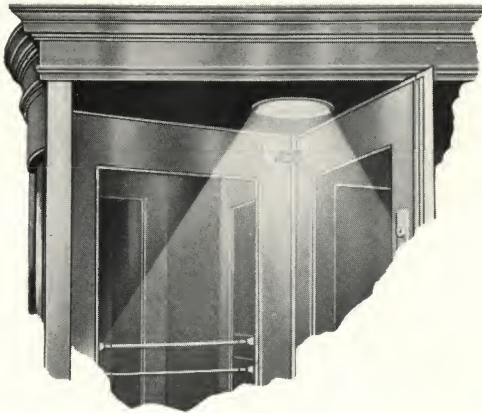
SHIPPING WEIGHTS COMPLETE, CRATED: TABLE OF WEIGHTS (See Key to Sizes Above)

Design	A	B	C	D	E	F	G	H	I	J	K	L
1192-1.....	1350	1375	1400	1425	1450	1475	1450	1475	1500	1475	1500	1525
1192-2.....	1600	1625	1650	1675	1700	1725	1700	1725	1750	1725	1750	1775
1192-3.....	1700	1725	1750	1775	1800	1825	1800	1825	1850	1825	1850	1875
1192-4.....	1900	1925	1950	1975	2000	2025	2000	2025	2050	2025	2050	2075
Wings only.....	925	935	950	960	975	985	975	990	1000	990	1000	1010

Special Features

Flexed Walls

When connection with building is made at the center of the circular enclosure and it is desired to make the full width of the vestibule available for exit in case of emergency, each wall of the enclosure is made with two hinged sections, which are held in their closed position by bolts. These bolts are so applied that the walls flex or swing open into the position shown by illustrations 7 and 8 on page 18.



Ceiling Light Domes

Flush ceiling lights consisting of obscured glass held in place with a 16-gauge $1\frac{1}{8}$ " bronze ring $10\frac{1}{4}$ " outside diameter.

Used for wood doors.

In case of bronze doors the flush light is cut in the ceiling, provided access can be had from overhead, if not bronze rings are used.

Recessed dome lights 12" diameter, $4\frac{3}{4}$ " deep. No glass required as this type of light is moulded and finished same as ceiling.

Spun dome lights 12" diameter made up of 18-gauge bronze and having a $\frac{3}{4}$ " lip for securing to underside of ceiling. No glass required.

Automatic Burglar Lock

In Van Kannel Doors, exclusively, you can get an automatic, electrically controlled burglar lock which is a gravity lock located in the ceiling chamber of the revolving door vestibule. Two locks are located on the quarter line which is inside the vestibule opening into the building. This electrical device is controlled by a solenoid which holds the gravity lock in position. As many stations as may be desired can be located throughout the banking quarters or building which will connect with and control this burglar lock, instantly locking the door by the pressure of a button.

Automatic burglar locks are found exclusively on Van Kannel doors. These are electrically controlled and may therefore be actuated from any part of the building, insuring the instantaneous locking of all exit doors.

Service

Service to Owners

The Van Kannel Revolving Door Co. is prepared to survey the entrance of any building and to make plans, write specifications and design doors which will be in architectural keeping with the building. We will make suggestions as to type of construction and materials or will submit prices for any materials which may be desired. No charges are made for this service.

Service to Architects

The Van Kannel Revolving Door Co. maintains an efficient drafting room which is at the disposal of architects. We are in a position to submit detailed plans and

specifications covering any type or form of construction of Revolving Doors desired. We are also prepared to send experts to interview architects and help them to make Revolving Door layouts which will harmonize with their projects. There is no charge for this service.

Dependability

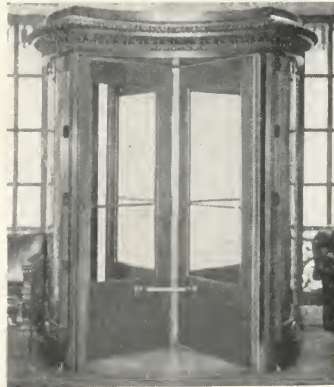
It has been aptly said—"First you build—then you simplify." Thirty-eight years' experience in the manufacture of Revolving Doors guarantees the purchaser of a Van Kannel Door the utmost in simplicity and dependability.

A Few Examples of Van Kannel Adaptability

The illustrations on this and the following three pages are indicative of the adaptability of Van Kannel Doors and the manner in which they can be readily made to harmonize with any architectural treatment.



C-type collapsible, special design, material—cast bronze and wood or could be constructed of all bronze.



Hollow bronze with practically an all cast vestibule, wings 16 gauge bronze over wood, C-type collapsible hardware.



1192-4 Special design with side fillers and pediment over opening; JC automatic collapsible hardware. Regular equipment.



1192-4 Special design with side fillers special 9-A post (see page 11) engaged columns, carved wood caps and bases. Carved dentil course in corners.



Louis XIV style, could be made in either wood or metal, collapsible C-type hardware.



All circular cornice with Chaneau cresting of cast bronze, collapsible C-type hardware, panelled ceiling and special low bottom rail. Two extra hand rails.



Louis XV or Rococo design, collapsible C-type hardware.

Special Constructions



Special design, 1192-4 special, 20-gauge bronze, wood core. Cast bronze cornice and ornamentation. Automatic collapsible Type JC mechanism. Swing doors equipped with Van Kannel 2-way bronze panic bolts. Equipment regular.



Special 16-gauge bronze over wood core, similar to our 1192-1 U, with exterior ornamental cast and drawn bronze cornice pilasters and panels. Automatic collapsible Type JC mechanism. Regular equipment.



Wood construction 1192-2, regular design with filler. Automatic collapsible Type JC mechanism. Regular equipment.



Wood construction, mahogany, 1192-4 adaptation. Revolving doors in pairs with side swinging doors. Automatic collapsible Type JC mechanism. Regular equipment.



Wood construction 1192-4, regular design with side swinging doors. Automatic collapsible Type JC mechanism. Regular equipment.



Wood door construction with carved cornice. Side swinging doors, with special hardware. Automatic collapsible Type JC mechanism. Regular equipment.



Wood door construction 1192-4 with special panels and extension posts to permit use of screen swinging doors in summer. Collapsible Type C mechanism. Regular equipment. Dead bolts instead of cylinder locks are used.

Special Constructions



Wood construction with carving, special design. Collapsible C-type hardware. Regular equipment. The exterior is enclosed with sliding doors (circular).



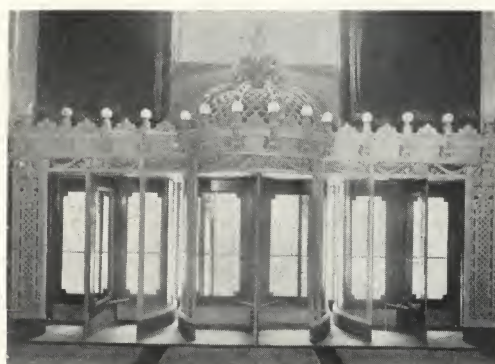
Vestibule design regular, wings special. Vestibule hollow bronze, wings heavy plate bronze with wood cores—bronze ornament cast and applied. Automatic collapsible Type JC mechanism. Regular equipment.



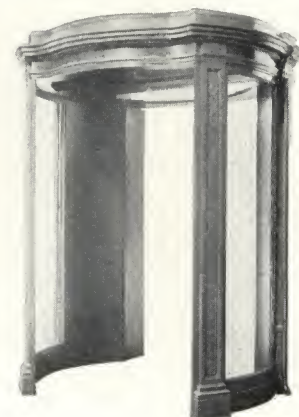
Type V. K. 6 A. P. (see page 5). Plain oak. Shows satisfactory handling of a low cost revolving door to entrance of high class hotel. Design and equipment regular throughout.



1192-4 Special design, special 5-A post (see page 11), collapsible C-type hardware.



Special cast iron, bronze and wood. Wings wood with bronze, glass in moulds. Collapsible C-type mechanism, equipment regular.



Cast and plate bronze construction over wood core, special design throughout, with glass panels in ceiling for lighting by electricity.



Regular 1192-2 design. Centrally located vestibule with side fillers, all of 16-gauge bronze construction. Collapsible C-type mechanism. Regular equipment.

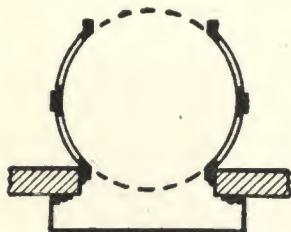


Quartered oak, design, special as regards cornice only, rest of the construction regular 1192-2 or 1192-4. Wood construction, centrally located revolving door vestibule with side swinging doors. Automatic collapsible Type JC mechanism.

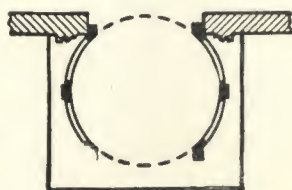


Wood construction with carved special wing design. Collapsible mechanism, C type. Regular equipment.

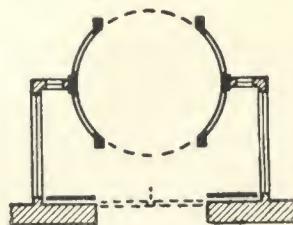
Various Positions for Placing Revolving Doors in Entrances



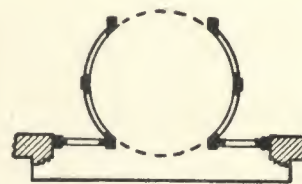
Plan No. 201 shows revolving door placed inside doorway.



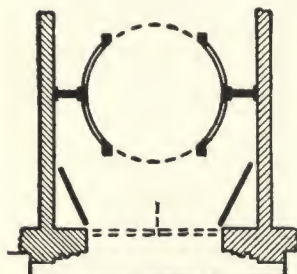
Plan No. 202—Revolving door placed outside resting on platform requires a roof over door enclosure.



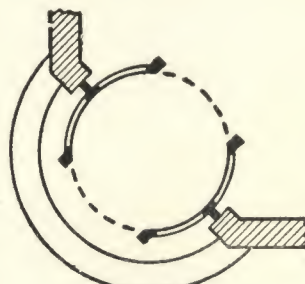
Plan No. 203—Joined to jambs of an interior vestibule. Hinged doors in front for closing at night.



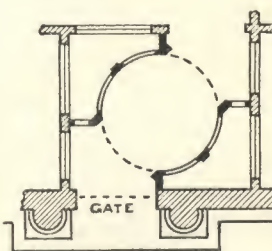
Plan No. 204—A wide entrance, space at sides of enclosure filled in by two glazed panels.



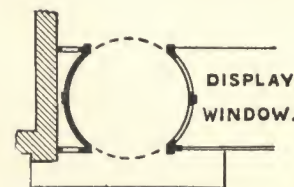
Plan No. 205—Revolving door set back in hallway, with old swing doors left in place.



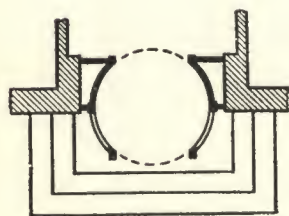
Plan No. 206—A corner entrance. Center pilaster of curved walls joined to building jambs. This method of installation usually requires a roof over exposed half of revolving door enclosure.



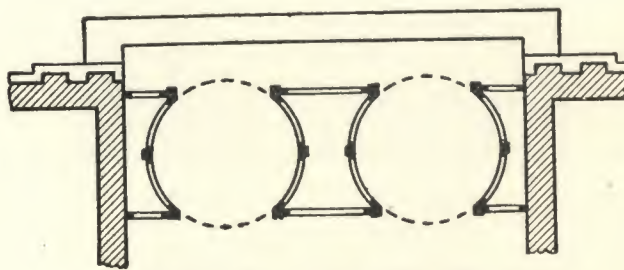
Plan No. 207—A diagonal entrance, there being an excellent approach to the revolving door both from the inside and outside.



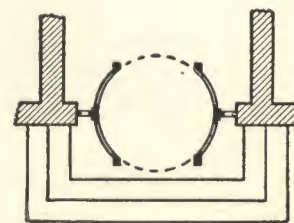
Plan No. 208—Store entrance with display window. The curved wall of the revolving door forms the glazed sash for display window. The other curved wall is made solid when placed near wall of building.



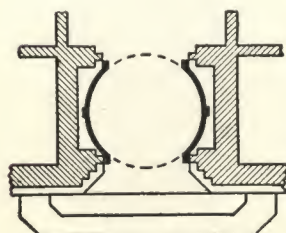
Plan No. 209—Half of revolving door inside solid wall sections, other half outside having glazed walls. Requires roof outside of transom.



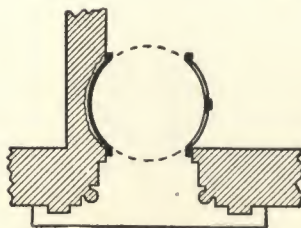
Plan No. 211—Twin revolving doors. Wide entrance (about 18 feet) giving a central display case. Cornice inside and outside straight from wall to wall. An entrance of 15 feet is sufficient for two standard doors installed in this way.



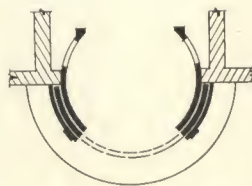
Plan No. 212—Like Plan No. 209, except that both walls are glazed.



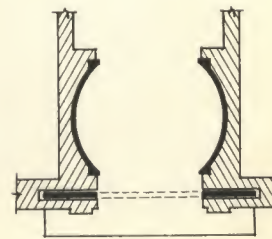
Plan No. 213—Jambs of revolving doors join directly to the four jambs of the building.



Plan No. 214—Shows building wall cut out to permit curved wall of revolving door being put in place, making a correct junction at front entrance.



Plan No. 215—Revolving door centrally located with specially constructed curved sliding doors and wall pockets.



Plan No. 216—Solid wall construction with a sliding door and pockets to receive same inside walls.

Operating Instructions Furnished

EVERY Van Kannel Revolving Door must give continuous satisfaction. To enable purchasers to get the best service obtainable from their Van Kannel doors, an operating chart is delivered upon erection of the door. These charts show all working parts. They give explicit instructions for operating and oiling doors.

They also furnish a simple key for ordering any parts which are subject to wear and which may need replacement.

The charts measure 22 x 28 inches and are designed for every type of Van Kannel door manufactured.

The Van Kannel Revolving Door Company periodically correspond with every purchaser as an insurance that their doors are rendering the maximum of satisfaction.

Van Kannel Nation-Wide Service



Van Kannel Sales and Service Representatives are located at each city above shown. This nation-wide sales organization makes for dispatch and for the continued satisfaction of every Van Kannel Revolving Door purchaser.

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